

## **Appendix A**

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### *Definitions and Agency Descriptions*

## **APPENDIX A**

### **DEFINITIONS AND AGENCY DESCRIPTIONS**

Terminology used within this Scoping Document is described and defined below. The glossary of definitions is intended as an aid for purposes of the Oroville relicensing only and is not intended, nor should it be construed as, a legally accurate definition of terms contained therein.

#### **DEFINITIONS**

afterbay	A reservoir located immediately downstream from a powerhouse, sometimes used to re-regulate flows to the river or stream.
anadromous	Migrating up rivers from the sea to breed in freshwater, such as salmon and steelhead.
bank	The rising ground bordering a stream or river. Banks are identified as right or left as viewed facing downstream.
basin	A land area having a common outlet for its surface water runoff.
basin plan	Regional Water Quality Control Board's Central Valley Regional Water Quality Control Plan (CVRWQCB 1998) identifies beneficial uses, water quality objectives, numeric and narrative standards for the basin that includes the Feather River watershed.
beneficial use	Traditionally, the use of water for such benefits as agriculture, mining, power development, and domestic water supply.
capacity	The production level for which an electrical generating unit or other electrical apparatus is rated, either by the user or manufacturer. (FERC) Capacity is also used synonymously with capability.
channel	An open conduit either naturally or artificially created which periodically or continuously contains moving water; or forms a connecting link between two bodies of water. River, creek, run, anabranch, and tributary are some of the terms used to describe natural channels. Canal and floodway are two terms used to describe artificial channels.
confluence	The point where two streams meet.
consumptive use	Non-reusable withdrawal of water where the water is evaporated, transpired by plants, incorporated into products or crops, or consumed by humans or animals.
coordinated operation	Generally, the operation of two or more interconnected systems to achieve greater reliability and economy. As applied to hydropower resources, the operation of a group of hydropower plants to obtain optimal power benefits with due consideration to all other uses.

coordination	The practice by which two or more interconnected electric power systems augment the reliability of bulk electric power supply by establishing planning and operating standards; by exchanging pertinent information regarding additions, retirements, and modifications to the bulk electric power supply system; and by joint review of these changes to assure that they meet the predetermined standards.
crest	(1) The highest stage or level of a flood wave as it passes a point. (2) The top of a dam, dike, spillway, levee or weir, to which water must rise before passing over the structure.
cumulative impact	The impact on the environment which results from the incremental impact of an action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. (CEQ regulations 40 CFR 1508.7)
dam	A structure for impounding water.
delta	The nearly flat alluvial tract of land at the mouth of a river, commonly forming a triangular or fan-shaped plain. Most deltas are partly below water.
demand	The rate at which electric energy is delivered to or by a system, part of a system, or a piece of equipment. It is expressed in kilowatts, kilovoltamperes, or other suitable units at a given instant or averaged over any designated period of time. The primary source of “demand” is the power-consuming equipment of the customers.
designated	Given formal statutory recognition, as in a federal or state river system.
discharge	The rate of streamflow at a given instant in terms of volume per unit of time.
diversion	The taking of water from a stream or other body of water into a canal, pipe, reservoir, or other conduit.
docket	A formal record of a Federal Energy Regulatory Commission proceeding. Dockets are available for inspection and copying by the public. Dockets for hydroelectric projects can be accessed through the FERC CIPS website.
ecosystem	The interacting system of a biological community and its geochemical and geophysical environment.
effects	Effects and impacts as used in the CEQ regulations are synonymous. Effects include ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, or health, whether direct, indirect, or cumulative. Effects may also include those resulting from actions that may have both beneficial and detrimental effects, even if on balance the agency believes that the effect will be beneficial.

energy	Capacity of a physical system to do work as measured by the capability (potential energy) or the conversion of this capability to motion (kinetic energy). Energy has several forms, some of which are easily convertible and can be changed to another form useful for work. Most of the world's convertible energy comes from fossil fuels that are burned to produce heat that is then used as a transfer medium to mechanical or other means in order to accomplish tasks.
environment	The sum of all external conditions and influences affecting the life, development, and, ultimately, the survival of an organism.
erosion	The wearing away of soil and rock by weathering, mass wasting, and the action of streams, glaciers, waves, wind, and underground water.
fish ladder	A series of ascending pools of running water constructed to enable fish to swim upstream around or over a dam.
fish passage	Features of a dam that enable fish to move around, through, or over a dam without harm. Generally an upstream fish ladder or a downstream bypass system
flood	The inundation of a normally dry area caused by high flow, or overflow of water from an established watercourse (such as a river, stream, or drainage ditch), or ponding of water at or near the point where the rain fell. This is a duration-type event with a slower onset than flash flooding, normally greater than 6 hours
flood management	(1) Reducing risk by building dams and/or embankments an/or altering the river channel. (2) Reducing flood risk by actions such as discouraging floodplain development, establishing flood warning systems, protecting urban areas, and allowing the most flood-prone areas to remain as wetlands
floodplain	That portion of a river valley, adjacent to the channel, that is built of sediments deposited during flood events that becomes inundated with water when the river overflows its bank at flood stages.
forebay	The impoundment immediately above a dam or hydroelectric plant intake structure from which water is drawn into a tunnel or penstock for delivery to the powerhouse. The term is applicable to all types of hydroelectric developments (storage, run-of-river, and pumped storage).
gate	A device that is moved across a waterway from an external position to control or stop flow
generation	The process of producing electric energy by transforming other forms of energy; also, the amount of electric energy produced, usually expressed in kilowatt-hours.
habitat	The environment in which the life needs of a plant or animal are supplied.

human environment	Defined by NEPA regulations to include the natural and physical environment and the relationship of people with that environment.
hydrology	The applied science concerned with the waters of the earth, their occurrences, distribution, and circulation through the unending hydrologic cycle of evaporation, transpiration, precipitation, infiltration, storage, and runoff.
hydropower	The harnessing of flowing water to produce mechanical or electrical energy.
impoundment	A body of water such as a pond, formed by a dam, dike, floodgate or other barrier.
indirect effects	Effects that are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems.
instream flow	The water flowing in a riverbed, which excludes water diverted from the river for human use
intake	The entrance to a conduit through a dam or a water facility.
irrigation	The controlled application of water to arable lands to supply water requirements not satisfied by rainfall.
levee	An artificial embankment built along a watercourse to protect land from flooding. If built of concrete or masonry the structure is referred to as a floodwall. Levees and floodwalls confine streamflow within a specified area to prevent flooding.
license	Authorization by the FERC to construct, operate, and maintain non-federal hydro projects for a period up to 50 years.
licensee	Any person, State, or municipality licensed under the provisions of Section 4 of this Act, and any assignee or successor in interest thereof (Federal Power Act, Sec. 3 (5)). The Department of Water Resources (DWR) is the licensee for Oroville Facilities FERC Project 2100. A licensee takes the lead in developing necessary information and preparing formal documents related to a project.
load	The amount of electric power or gas delivered or required at any point on a system. Load originates primarily at the energy consuming equipment of the customers.
mandatory conditions	Refers to the specific legal authority of resource agencies to impose conditions on a FERC-licensed project.
minimum flow	The minimum river flow required to sustain aquatic life. Often required at a hydroelectric dam as a condition of the dam owner's operating license.
mitigation	To make or become less intense or severe.

new license	Any license, except an annual license issued under section 15 of the Federal Power Act, for a water power project that is issued under the Federal Power Act after the initial license for that project.
nutrients	Animal, vegetable, or mineral substance that nourishes individual organisms and ecosystems.
off-peak energy	Electric energy supplied during periods of relatively low system demands.
Oroville Facilities	Elements of the State Water Project, Oroville Division, as identified in the Federal Energy Regulatory Commission License, Project No. 2100. These elements are listed in Section 2.1 of this document.
power	The rate at which work is done, The rate at which energy is transferred. The watt is a typical unit of power measured in units of work per unit of time.
production (electric)	Act or process of producing electrical energy from other forms of energy; also, the amount of electrical energy produced expressed in kWh
ramping	The act of increasing or decreasing stream flows from a powerhouse, dam, or diversion structure.
rating	A manufacturer's guaranteed performance of a machine, transmission line, etc., based on design features and test data. The rating will specify such limits and load voltage, temperature, frequency, etc. The rating is generally printed on a nameplate attached to equipment and is commonly referred to as the nameplate rating, nameplate capacity, etc. (FERC).
reach	The distance between two specific points delineating a portion of a stream or river.
relicensing	The administrative proceeding in which FERC, in consultation with other Federal and State agencies, decides whether and on what terms to issue a new license for an existing hydroelectric project at the expiration of the original license.
reservoir	A pond, lake, tank or basin, natural or man-made, used for the storage, regulation, and control of water
resource agency	A federal, State, or interstate agency exercising administration over the areas of flood control, navigation, irrigation, recreation, fish and wildlife, water resource management (including water rights), or cultural or other relevant resources of the State or States in which a project is or will be located. (FERC regulations - 18 CFR 4.30(b)(27))
riparian	Pertaining to or situated on the bank of a body of water, especially of a river.
riparian habitat	The habitat found on or along stream banks and river banks.
river	A natural stream of water emptying into an ocean, lake, or another river.

river basin	The entire area drained by a river and its tributaries.
runoff	Water in excess of that which can be absorbed by the ground and which runs off the land into streams, rivers, or lakes
sand	A detrital particle smaller than a granule and larger than a silt grain, having a diameter in the range of 1/16 to 2 mm.
scoping	An early and open public process that is part of the NEPA and CEQA process for determining the issues to be addressed and identifying significant issues, and needed analysis related to a proposed action. Scoping invites participation by government agencies, tribes and other interested parties, identifying issues to be analyzed in depth, eliminating issues which are not significant, identifying other environmental review or consultation requirements, and identifying timing of environmental review, planning, and decision-making.
scour	Concentrated erosive action, especially by stream water, as on the outside curve of a bend; also, a place in a stream bed swept clear by a swift current.
sediment	Solid fragmental material that is transported and deposited by water, wind or ice, chemically precipitated from solution, or secreted by organisms that form in layers in loose unconsolidated form (e.g., sand, mud, till).
settlement agreement	A formal agreement that states agreed-to provisions, in this case for a new FERC license. FERC encourages Applicants to prepare and file Settlement Agreements. Most measures in Settlement Agreements are included in license Articles; however, FERC cannot include measures that are in conflict with the Federal Power Act or other federal statutes or beyond its regulatory jurisdiction.
sere	A sequence of ecologic communities that succeed one another in development from pioneer stage to climax community.
spill	Water passed over a dam without going through turbines to produce electricity. Spill can be forced, when there is no storage capability and flows exceed turbine capacity, or planned (e.g., when water is spilled to enhance juvenile fish passage).
spillway	A structure over or through which excess or flood flows are discharged. If gates control the flow, it is a controlled spillway, if the elevation of the spillway crest is the only control, it is an uncontrolled spillway.
storage reservoir	Reservoir that has space for retaining water - from springtime snowmelts, for example. Retained water is released as necessary for various uses, including power production, fish passage, irrigation, and navigation.
stratification	Thermal layering of water in lakes and streams.

transmission	The movement or transfer of electric energy over an interconnected group of lines and associated equipment between points of supply and points at which it is transformed for delivery to consumers or is delivered to other electric systems. Transmission is considered to end when the energy is transformed for distribution to the consumer.
tributary	Any stream that contributes water to another stream
turbidity	A measure of the extent to which water is stirred up or disturbed, as by sediment; opaqueness due to suspended sediment
water quality	The condition of water as determined by measurements of such factors as suspended solids, acidity, turbidity, dissolved oxygen, and temperature and by the presence of organic matter and/or chemical compounds
water rights	Priority claims to water. A legal right to use a specific amount of water from a natural or artificial body of surface water for general or specific purposes such as irrigation, mining, power, domestic use, or instream flow
watershed	All the land drained by a given river and its tributaries An entire drainage basin including all living and nonliving components of the system.
water year	The 12-month period for which the USGS reports surface water supplies. Water years begin October 1 and end the following September 30, and are designated by the calendar year in which the water year ends.
wetlands	Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. (US Army Corps of Engineers and US EPA definition) Wetlands must have the following three attributes: (1) at least periodically, the land supports predominately hydrophytes; (2) the substrate is predominately un-drained, hydric soil; and (3) the substrate is on soil and is saturated with water or covered by shallow water at some time during the growing season of each year.

## FEDERAL AGENCIES

**CEQ: *Council on Environmental Quality*** – Agency of the President responsible for the oversight and development of the National Environmental Policy Act (NEPA) implementing regulations. In 1979, CEQ issued first set of binding regulations concerning the implementation of NEPA.

**USEPA: *Environmental Protection Agency*** – Federal Agency created in 1970. The mission of the U.S. Environmental Protection Agency is to protect human health and to safeguard the natural environment--air, water, and land--upon which life depends. The EPA has three roles in the NEPA process. EPA reviews all EIS documents for adequacy and environmental quality of the proposal, provides filing and noticing in the Federal Register, and serves as a cooperating agency concerning EPA environmental programs (water quality, air quality, solid waste, toxic substances, and other areas of pollution control).



**FERC: *Federal Energy Regulatory Commission*** – Commission composed of five members appointed by the President, supported by a staff that includes the Office of Hydropower Licensing, that is charged with reviewing and processing license and re-license applications and making recommendations to the Commission.

**NMFS: *National Marine Fisheries Service*** - The National Marine Fisheries Service (NMFS) or "NOAA Fisheries" is a part of the National Oceanic and Atmospheric Administration within the Department of Commerce. NMFS administers NOAA's programs that support the domestic and international conservation and management of living marine resources. NMFS provides services and products to support domestic and international fisheries management operations, fisheries development, trade and industry assistance activities, enforcement, protected species and habitat conservation operations, and the scientific and technical aspects of NOAA's marine fisheries program. NMFS administers the ESA as it relates to anadromous fish.

**USACE: *United States Army Corps of Engineers*** – Federal government's largest water resource development and management agency, regulates development in navigable waters and wetlands through its Section 404 (Clean Water Act) permitting process.

**USFS: *United States Forest Service*** – The U.S. Department of Agriculture Forest Service is a Federal agency that manages public lands in national forests and grasslands. The Forest Service is mandated by Congress to manage national forests for additional multiple uses and benefits, and for the sustained yield of renewable resources such as water, forage, wildlife, wood, and recreation. Multiple use means managing resources under the best combination of uses to benefit the American people while ensuring the productivity of the land and protecting the quality of the environment. The Forest Service is also the largest forestry research organization in the world, and provides technical and financial assistance to state and private forestry resource agencies.

**USFWS: *United States Fish and Wildlife Service*** - The U.S. Fish and Wildlife Service is the principal Federal agency responsible for conserving, protecting and enhancing fish, wildlife and plants and their habitats for the continuing benefit of the American people. Among its key functions, the Service enforces Federal wildlife laws, protects endangered species, manages migratory birds, restores nationally significant fisheries, conserves and restores wildlife habitat such as wetlands, and helps foreign governments with their international conservation efforts. It also oversees the Federal Aid program that distributes hundreds of millions of dollars in excise taxes on fishing and hunting equipment to State fish and wildlife agencies.

**Indian Tribe** – In reference to a proposal to apply for a license or exemption for a hydropower project, an Indian Tribe means a separate and distinct community or body of people of the same or similar aboriginal race historically inhabiting areas within the United States that:

- is united in a community under one leadership or government constituted by law or long-standing custom;
- inhabits a particular territory;
- is recognized by treaty with the United States, by federal statute, or by U.S. Secretary of the Interior; and
- whose legal rights as a tribe may be affected by the development and operation of the hydropower project proposed, as where the operation of the project could interfere with the management and harvest of anadromous fish or where the project works would be located within the tribe's reservation.

## STATE AGENCIES

**DFG: *Department of Fish and Game*** - The mission of the Department of Fish and Game is to manage California's diverse fish, wildlife, and plant resources, and the habitats upon which they depend, for their ecological values and for their use and enjoyment by the public.

**DPR: *Department of Parks and Recreation*** – The mission of the Department of Parks and Recreation is to provide for the health, inspiration and education of the people of California by helping to preserve the state's extraordinary biological diversity, protecting its most valued natural and cultural resources, and creating opportunities for high-quality outdoor recreation. DPR is responsible for managing nearly 1.3 million acres, with over 280 miles of coastline; 625 miles of lake and river frontage; nearly 18,000 campsites; and 3,000 miles of hiking, biking, and equestrian trails.

**DWR: *Department of Water Resources*** – The mission of the Department of Water Resources is to manage the water resources of California in cooperation with other agencies, to benefit the State's people, and to protect, restore, and enhance the natural and human environments. DWR is specifically responsible for design, construction, operation and maintenance of the State Water Project, which includes the Oroville Facilities. DWR is the licensee for the Oroville Facilities.

**NAHC: *Native American Heritage Commission*** - The Mission of the Native American Heritage Commission is to provide protection to Native American burials from vandalism and inadvertent destruction, provide a procedure for the notification of most likely descendants regarding the discovery of Native American human remains and associated grave goods, bring legal action to prevent severe and irreparable damage to sacred shrines, ceremonial sites, sanctified cemeteries, and place of worship on public property, and maintain an inventory of sacred places.

**SHPO: *State Historic Preservation Officer*** – Within California, the SHPO is responsible for assisting federal and other state agencies with the implementation of laws designed to protect cultural resources. The SHPO is afforded an opportunity to comment on any actions that may affect a historic property.

**SWRCB: *State Water Resources Control Board*** – In 1967, the Porter-Cologne Act established the SWRCB and nine regional boards as the state agencies with primary authority over the regulation of water quality and allocation of appropriative surface water rights in California. SWRCB also implements Clean Water Act provisions within the State.